

REMARKS

Claims 1-6, 8-29, and 31-38 are pending in the application and are currently rejected. Claim 18 has been amended to correct a typographical error. Claim 39 has been added. Reconsideration is requested.

The Examiner rejected claims 1, 2, 11 and 36 under 35 U.S.C. §103(a) as being unpatentable over von Oepen (U.S. Pat. No. 6,652,573) in view of Ehr et al. (U.S. Pat. No. 6,033,433). Applicant respectfully traverses this rejection. Assuming *arguendo* that these two references are combinable, all of the claim limitations are not taught or suggested in either reference. Claim 1 specifically claims a bounded aperture that is disposed between a first link portion and a second link portion, where the aperture is nearer one of the adjacent rings. The Examiner states that Ehr teaches an alternate embodiment to the bulged sections of von Oepen, however, applicant respectfully submits that this is incorrect. The spiral structures 16 of Ehr are links themselves and are not sections of a link like the bulged sections of the link disclosed in von Oepen. In Ehr, the two pairs of elongated members 13a and 13b are formed into a spiral arrangement 16 and connect adjacent segments 12. Further, FIG. 25 in Ehr shows that the aperture is in the middle of the spiral, and therefore, is not disposed nearer one of the adjacent rings as recited in claim 1. By combining the link of Ehr with the stent of von Oepen, the limitation that the aperture is disposed nearer one of the adjacent rings is not present and claim 1 and those claims that depend from claim 1 are also patentable over von Oepen in view of Ehr.

It would also not have been obvious to a person of ordinary skill in the art to reconfigure the spiral structure of Ehr to make one of the pairs of elongated members 13a and 13b longer in order for the bounded aperture to be nearer one of the adjacent links. Ehr discloses that the spiral structures allow the stent to expand when the structures straighten out, and the structures limit recoil and add resistance to compression for the expanded stent. By changing the configuration of the spiral structures, there would have been no likelihood of success that this new configuration would still limit recoil and add resistance in a uniform manner to the compression for the expanded stent.

Further, it would not be obvious for a person of ordinary skill in the art to transform the bulged sections of von Oepen or the spiral links of Ehr into the bounded aperture between two link portions as claimed in the current application. The use of the bulged section or the spiral links on the stent of the present invention might result in twisting or less uniform movement of the struts, and therefore function differently from the present invention. For this reason as well, the pending claims are patentable over von Oepen in view of Ehr.

It is also not proper to combine von Oepen with Ehr. It is stated in MPEP §2143.01, that "if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." The intended purpose of von Oepen is to provide links with loops or bulges that allow the diameter of radial openings to increase so that a second stent can easily pass through the radial openings. See column 1, lines 46-53 of von Oepen. The spiral structures, including the pairs of members connected to

adjacent rings, that forms the links disclosed in Ehr would be unsatisfactory for the purpose of von Oepen, because the spiral structure and pairs of connecting members would not allow the cross-section area of the radial openings to be large enough to easily fit a second stent through. This can be seen by looking at the figures in Ehr showing the spiral structures connecting adjacent rings, where the cross-section area of the radial opening spaces (area between spiral structures) is significantly smaller than the radial openings disclosed in von Oepen. Therefore, replacing the links in von Oepen with the spiral links disclosed in Ehr would not be satisfactory for easily passing a second stent through the radial openings. For this reason, von Oepen should not be combined with Ehr. Claims 1, 2, 11 and 36 are therefore patentable over von Oepen in view of Ehr.

Claims 3, 4, 5 and 6 have also been rejected under 35 U.S.C. §103(a) as being unpatentable over von Oepen in view of Ehr. The Examiner states that it is an obvious design choice to change the shape of the bounded aperture von Oepen. Applicant requests that the Examiner provide a reference showing that it is an obvious design choice to change the shape of the bounded aperture. The arguments made above with respect to the patentability of the claims over von Oepen in view of Ehr, including the improper combining of von Oepen with Ehr, are reasserted here. For those reasons discussed above, claims 3, 4, 5 and 6, which depend from claim 1, are also patentable over von Oepen in view of Ehr.

Claims 12, 13, 17, 18, 24, 25, 37 and 38 have been rejected under 35 U.S.C. §103(a) as being unpatentable over von Oepen in view of Ehr as applied to claims 1, 2, 8, 10, 11 and 36 above, and further in view of Frantzen (U.S. Pat. No. 5,843,175). The

arguments made above with respect to the patentability of the claims over von Oepen in view of Ehr, including the improper combining of von Oepen with Ehr, are reasserted here. Independent claim 17 also includes the limitation that the aperture is disposed nearer one of the ends of the adjacent rings, and therefore all the limitations of claim 17 are also not found in von Oepen in view of Ehr and further in view of Frantzen. Therefore, claims 12 and 13 which depend from claim 1, and claims 18, 24, 25, 37 and 38 which depend from claim 17 are patentable over von Oepen in view of Ehr and further in view of Frantzen.

Further, there is no motivation or suggestion found in the references to combine the elbow of Frantzen with the bulge section of von Oepen or the spiral link of Ehr. Applicant respectfully reminds the Examiner that picking and choosing elements from several references and then combining them to arrive at the claimed invention using only hindsight is impermissible. For all of these reasons, claims 12, 13, 17, 18, 24, 25, 37 and 38 are patentable over the cited references.

Claim 19 has been rejected under 35 U.S.C. §103(a) as being unpatentable over von Oepen in view of Ehr, and further in view of Frantzen. The arguments made above with respect to the patentability of the claims over von Oepen in view of Ehr and further in view of Frantzen are reasserted here. The Examiner states that it is an obvious design choice to change the shape of the bounded aperture von Oepen. Applicant requests that the Examiner provide a reference showing that it is an obvious design choice to change the shape of the bounded aperture. Claim 19, which depends from claim 17, is therefore patentable over von Oepen in view of Ehr and further in view of Frantzen.

Claims 8, 9, 10, 14, 20, 22 and 23 have been rejected under 35 U.S.C. §103(a) as being unpatentable over von Oepen in view of Ehr as applied to claims 1, 2, 8, 10, 11 and 36, and further in view of Fischell et al. (U.S. Pat. No. 6,190,403). The arguments made above with respect to the patentability of the claims over von Oepen in view of Ehr, including the improper combining of von Oepen with Ehr, are reasserted here. Fischell also does not disclose all the limitations of independent claims 1 or 17, specifically, that a bounded aperture in between a first link portion and a second link portion is disposed nearer one of the adjacent rings. Further, it would not have been obvious for a person of ordinary skill in the art to replace the spiral structures of Ehr that were used to modify von Oepen, with the undulating links of Fischell, because it would redesign the spiral structures of Ehr. Also, the addition of undulations might go against the purpose of von Oepen, which is to expand the cross-section area of the radial openings to easily allow a second stent to pass through. It would seem that the addition of undulations to the links of von Oepen would decrease the cross section area of the radial openings because the structure of the undulations would extend into the radial openings. Therefore, claims 8, 9, 10 and 14, which depend from claim 1, are patentable over these cited references, and claims 20, 22 and 23, which depend from claim 17, are also patentable over these cited references.

Claims 15 and 16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over von Oepen in view of Ehr as applied to claims 1, 2, 8, 10, 11 and 36, and further in view of Ogi et al. (U.S. Pat. No. 5,925,061). All the arguments made above with respect to the patentability of the claims over von Oepen in view of Ehr,

including the improper combining of von Oepen with Ehr, are reasserted here. For these reasons, claims 15 and 16, which depend from claim 1, are therefore patentable over the cited references.

Claim 21 has been rejected under 35 U.S.C. §103(a) as being unpatentable over von Oepen in view of Ehr, further in view of Frantzen as applied to claims 12, 13, 17, 18, 24, 25, 37 and 38, and further in view of Fischell. All arguments made above with respect to the patentability of the claims over von Oepen in view of Ehr, further in view of Frantzen and/or Fischell are reasserted here, including the arguments relating to improperly combining these references with each other. There is no motivation to combine the undulations of Fischell with von Oepen for the reasons stated above, and applicant submits that such a combination is based on impermissible hindsight which must be avoided. For these reasons, claim 21 is patentable over these cited references.

Claim 26 has been rejected under 35 U.S.C. §103(a) as being unpatentable over von Oepen in view of Ehr, further in view of Frantzen as applied to claims 12, 13, 17, 18, 24, 25, 37 and 38, and further in view of Rolando et al. (EP 0 806 190). The arguments made above with respect to the patentability of claim 21 are reasserted here. Claim 26 depends from claim 21 and is therefore also patentable over the cited references.

Claims 27, 28, 31, 34, 35 and 38 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Penn et al. (WO 97/32543) in view of Ogi, and further in view of Frantzen. Applicant respectfully traverses this rejection. There is no motivation or suggestion found in the references to combine the stent of Penn with the aperture disclosed in Ogi. As stated in the abstract of Penn, the design of the stent including the

links disclosed in Penn provides "a very desirable balance of lateral flexibility of the unexpanded stent and radial rigidity of the expanded stent." However, when discussing the leaf-spring like member 38b, Ogi states at column 8, lines 1-3, that "by making the stent more compressible with the aforementioned spring type designs, the folding or compression profiles of the resultant stent may be negatively effected." Since Ogi discloses that the leaf-spring like member 38b may negatively effect the folding or compression profiles of the stent, a person of ordinary skill in the art would therefore not combine this leaf-spring like member with the stent found in Penn that provides a desirable balance of lateral flexibility of the unexpanded stent and radial rigidity of the expanded stent. Further, there is no motivation or suggestion found in any of the cited references to combine the elbow of Frantzen with the stent of Penn. It is also unclear to the applicant how a person of ordinary skill in the art would have combined the elbow of Frantzen with the aperture of Ogi and the stent of Penn to form the limitation found in claim 27, that "two aperture link portions disposed generally perpendicular to the stent longitudinal axis and being connected to the link by two tapered and radiused link portions disposed on opposite sides of the aperture," without using impermissible hindsight. For all of these reasons, claims 27, 28, 31, 34, 35 and 38 are patentable over these cited references.

Claim 29 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Penn et al. (WO 97/32543) in view of Ogi, and further in view of Frantzen, further in view of Fischell. Applicant reasserts the arguments made above relating to the patentability of the claims over Penn in view of Ogi and further in view of Frantzen.

Further, there is no motivation or suggestion found in the references to combine the undulating links of Fischell with the stent of Penn. For these reasons, claim 29 is also patentable over the cited references.

Claims 32 and 33 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Penn et al. (WO 97/32543) in view of Ogi, and further in view of Frantzen, further in view of Rolando. Applicant reasserts the arguments made above relating to the patentability of the claims over Penn in view of Ogi and further in view of Frantzen. For these reasons, claims 32 and 33, which depend from claim 27, are patentable over the cited references.

Applicant has added new claim 39, which depends from claim 1, and is therefore also patentable over the cited references.

CONCLUSION

In view of the foregoing, applicant respectfully submits that all pending claims are in condition for allowance. Reexamination and reconsideration of the application are respectfully requested and allowance at an early date is solicited.

Respectfully submitted,

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